

### Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	ELI4 Flat Phantom	Shell thickness: $2 \pm 0.2$ mm
EUT Positioning	Touch Position	
Zoom Scan Resolution	$dx, dy = 4.0$ mm, $dz = 1.4$ mm	Graded Ratio = 1.4 (Z direction)
Frequency	$13$ MHz $\pm 1$ MHz	

### Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	$22.0$ °C	55.0	$0.75$ mho/m
Measured Head TSL parameters	$(22.0 \pm 0.2)$ °C	$54.7 \pm 6$ %	$0.74$ mho/m $\pm 6$ %
Head TSL temperature change during test	$< 0.5$ °C	----	----

### SAR result with Head TSL

SAR averaged over $1$ cm <sup>3</sup> (1 g) of Head TSL	Condition	
SAR measured	$1$ W input power	$0.577$ W/kg
SAR for nominal Head TSL parameters	normalized to $1$ W	<b><math>0.582</math> W/kg <math>\pm 18.4</math> % (k=2)</b>

SAR averaged over $10$ cm <sup>3</sup> (10 g) of Head TSL	condition	
SAR measured	$1$ W input power	$0.356$ W/kg
SAR for nominal Head TSL parameters	normalized to $1$ W	<b><math>0.359</math> W/kg <math>\pm 18.0</math> % (k=2)</b>

**Appendix (Additional assessments outside the scope of SCS 0108)**

**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	50.0 $\Omega$ - 0.8 j $\Omega$
Return Loss	- 41.4 dB

**Additional EUT Data**

Manufactured by	SPEAG
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## DASY5 Validation Report for Head TSL

Date: 16.05.2022

Test Laboratory: SPEAG, Zurich, Switzerland

**DUT: CLA13; Type: CLA13; Serial: CLA13 - SN: 1009**

Communication System: UID 0 - CW; Frequency: 13 MHz

Medium parameters used:  $f = 13$  MHz;  $\sigma = 0.74$  S/m;  $\epsilon_r = 54.7$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: EX3DV4 - SN3877; ConvF(15.33, 15.33, 15.33) @ 13 MHz; Calibrated: 31.12.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn654; Calibrated: 26.01.2022
- Phantom: ELI v4.0; Type: QDOVA001BB; Serial: TP:1003
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

### CLA Calibration for HSL-LF Tissue/CLA-13, touch configuration, Pin=1W/Zoom Scan,

**dist=1.4mm (8x10x8)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 32.17 V/m; Power Drift = -0.09 dB

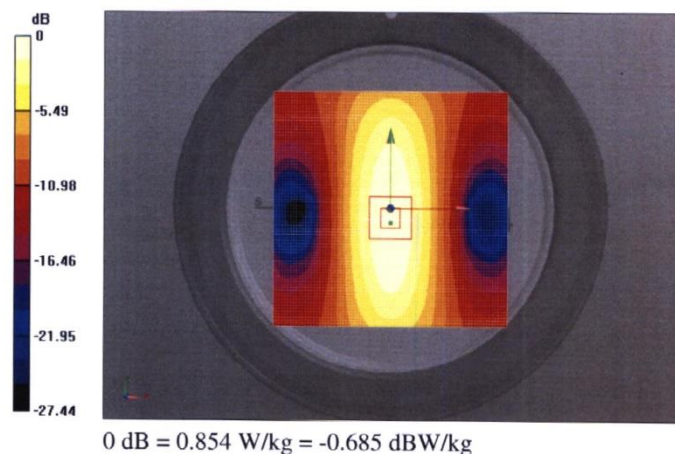
Peak SAR (extrapolated) = 1.18 W/kg

**SAR(1 g) = 0.577 W/kg; SAR(10 g) = 0.356 W/kg**

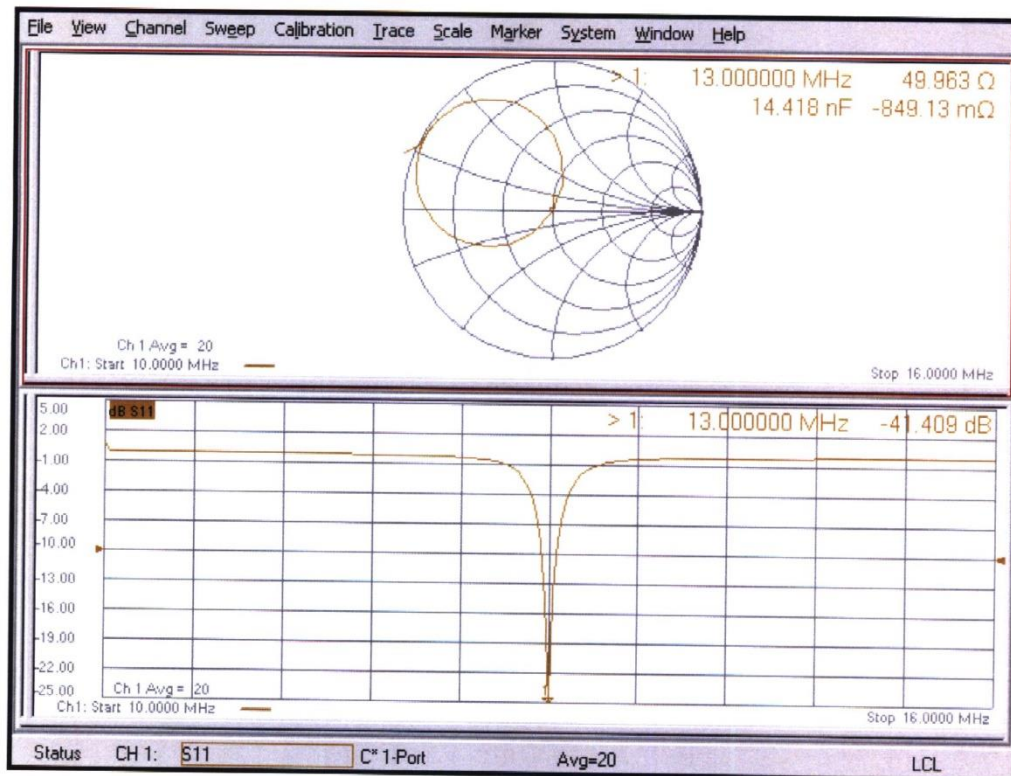
Smallest distance from peaks to all points 3 dB below = 19.8 mm

Ratio of SAR at M2 to SAR at M1 = 78.4%

Maximum value of SAR (measured) = 0.854 W/kg



## Impedance Measurement Plot for Head TSL



## ANNEX I Accreditation Certificate

United States Department of Commerce National Institute of Standards and Technology	
	
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<b>Certificate of Accreditation to ISO/IEC 17025:2017</b>	
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NVLAP LAB CODE: 600118-0	
<b>Telecommunication Technology Labs, CAICT</b>	
Beijing China	
<i>is accredited by the National Voluntary Laboratory Accreditation Program for specific services, listed on the Scope of Accreditation, for:</i>	
<b>Electromagnetic Compatibility &amp; Telecommunications</b>	
<i>This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated January 2009).</i>	
<hr/> 2022-10-01 through 2023-09-30 Effective Dates	<div><hr/>For the National Voluntary Laboratory Accreditation Program</div>